
	TRAVIS COUNTY ESD #5 MANCHACA FIRE RESCUE Department Best Practices	A104
	Authorized by:  Fire Chief Chris Barron	Effective: 7/18/2017 Rescinds: C-1.43 Reference: AFD A104 Application: Shift Personnel
Two-In / Two-Out		

I. Purpose

To establish procedures that ensure the highest level of fireground safety when operating in an atmosphere that is Immediately Dangerous to Life and Health (IDLH), such as is found in interior structural firefighting.

II. Background

Senate Bill 382 became law on September 1, 2001. This law incorporated OSHA 1910, the “two-in/two-out” standard. This law will enhance firefighter safety by providing for a stand-by team of at least two firefighters outside of the structure during interior structural firefighting. This policy is written in compliance with this law. The following is the Texas Commission on Fire Protection (TCFP) Procedures for Interior Structural Fire Fighting.

§435.17 - Procedures for Interior Structure Fire Fighting (2-in/2-out rule)

- A. *The fire department shall develop written procedures that comply with the Occupational Safety and Health Administration’s Final Rule, 29 CFR Section 1910.134(g)(4) by requiring:*
1. *A team of at least four fire protection personnel must be assembled before an interior fire attack can be made when the fire has progressed beyond the incipient stage;*
 2. *At least two fire protection personnel to enter the IDLH atmosphere and remain in visual or voice (not radio) contact with each other;*
 - a. *Visual means that the fire protection personnel must be close enough to see each other.*
 - b. *Voice means that the fire protection personnel of the entry team must be close enough to speak to one another without the use of radios.*
 3. *At least two fire protection personnel remain located outside the IDLH atmosphere to perform rescue of the fire protection personnel inside the IDLH atmosphere;*
 4. *All fire protection personnel engaged in interior structural firefighting use self-contained breathing apparatus and be clothed in a complete set of protective clothing as identified in Chapter 435;*

5. All fire protection personnel located outside the IDLH atmosphere be equipped with appropriate retrieval equipment where retrieval equipment would contribute to the rescue of the fire protection personnel that have entered the IDLH atmosphere;
 6. One of the outside fire protection personnel must actively monitor the status of the inside fire protection personnel and not be assigned other duties. The second outside fire protection personnel may be assigned to an additional role, including, but not limited to, incident commander, safety Officer, driver-operator, command technician or aide, or fire fighter/EMS personnel, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any fire protection personnel working at the scene;
 7. The fire protection personnel outside the IDLH atmosphere must remain in communication (including, but not limited to, radio) with the fire protection personnel in the IDLH atmosphere. Use of a signal line (rope) as a communications instrument for interior firefighting is not permitted by the commission. This does not preclude the use of rescue guide ropes (guide line or lifeline or by whatever name they may be called) used during structural searches; and
 8. Each outside fire protection personnel must have a complete set of protective clothing and self-contained breathing apparatus, as identified in Chapter 435, immediately accessible for use if the need for rescue activities inside the IDLH atmosphere is necessary.
- B. The fire department shall comply with the 2-in/2-out rule as described in this section except in an imminent life-threatening situation when immediate action could prevent the loss of life or serious injury before the team of four fire protection personnel are assembled.

This document is a direct adaptation of the Austin Fire Department SOG on two-in, two-out. It has been adopted by Manchaca Fire Rescue as an Auto Aid partner to maximize standardization between partner agencies. Variations and additions to the language from the parent AFD document will be signified by text in italics. Generic changes that do not affect content such as formatting and changing "AFD" to "MFR" will not be noted.

III. Policy

- A. **Two in / Two out defined.** Interior structural firefighting operations will not begin until two members are available outside the IDLH atmosphere to monitor the safety of the Inside Team(s) and, if necessary, effect rescue. (An exception is outlined in III.H.)
- B. **Inside team.** Inside Team members shall wear full PPE, use an SCBA and remain in visual or voice (not radio) contact with one another at all times.
- C. **Benchmark.** The first Inside Team shall announce on the radio when they enter the structure and that an Outside Team has been established, unless making an exception to the rule as outlined in III.H.
- D. **Outside team.** Outside Team members shall remain outside the IDLH atmosphere and maintain visual, voice or radio contact with the Inside Team(s).
- E. **Outside Team Monitor.** Anytime members are engaging in interior structural firefighting (no matter the number of members or apparatus on-scene) and a RIC has not yet been established, one of the Outside Team members must perform the role of the Outside Team Monitor (OTM) (unless excepted by III.H). The sole responsibility of the OTM is to monitor the safety of the Inside Teams.

- F. **PPE and communication.** Command will ensure that all members operating within an IDLH atmosphere are wearing full PPE and are using an SCBA. Command will further ensure that Inside Team(s) are in radio contact with the OTM or RIC, when established.

- G. **Command responsibility.** Command will ensure that an Outside Team is present anytime members are engaging in interior structural firefighting (no matter the number of members or apparatus on-scene), if a Rapid Intervention Company (RIC) has not yet been established. The exception to this is outlined in III.H.

- H. **Exception.** An Inside Team may make entry into an IDLH atmosphere without an Outside Team available when all four conditions are met as described below:
 - 1. **Occupant hazard.** There is a reasonable expectation that an occupant in danger of injury or death is within the structure;
 - 2. **PPE and orientation.** They comply with the PPE and SCBA requirements outlines above, and stay in visual or voice (not radio) contact with one another;
 - 3. **Declare intent.** They notify Fire Dispatch and responding Companies that they are entering for a possible rescue, and no Outside Team is available;
 - 4. **Egress.** They exit the structure as soon as they ascertain the life safety hazard to the occupants no longer exists, unless another Company arrives and advises the Inside Team that they have assumed the Outside Team role.

IV. Best Practices

The following best practices should be followed at all firefighting and emergency scene operations, except where deviation can be justified by Fire Officers. Any significant deviation should be communicated to responding/on-scene units as soon as possible.

- A. **Terminology.** The following terms apply for two-in/two-out
 - 1. **Incipient stage fire.** An incipient stage fire is a fire that is in the initial or beginning stage and that can be controlled or extinguished by portable fire extinguishers, Class II standpipes or small hose systems, without the need for protective clothing or breathing apparatus. (TCFP 421.5 [24])
 - 2. **Interior structural firefighting.** Interior structural firefighting is the physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures that are involved in a fire situation beyond the incipient stage. These conditions involve an Immediately Dangerous to Life and Health (IDLH) atmosphere. (TCFP 421.5 [25])

3. **Inside Team.** The inside team is a minimum of two members in full PPE and SCBA, in constant visual or voice (not radio) contact with one another.
4. **Outside Team.** The outside team is a minimum of two members outside the IDLH atmosphere who monitor the safety of the inside teams and are prepared to affect rescue.
5. **Outside Team Monitor (OTM).** The outside team monitor (OTM) is the outside team member whose only responsibility is to monitor the status of the inside teams.

B. Inside Team(s) Duties.

1. **PPE.** Wear full PPE and SCBA when entering an IDLH atmosphere.
2. **Operate as team.** Remain in teams of at least two members when in an IDLH atmosphere.
3. **Orientation.** Remain in voice (not radio) or visual contact with members of your team.
4. **Benchmark.** The first Inside Team should announce when entering the structure and if an Outside Team is established or if making an exception to the rule.
5. **OTM instruction.** If the OTM is part of your Company, direct the OTM in rejoining your team after being relieved by RIC.

C. Outside Team Monitor (OTM) Duties.

1. **Duties.** The OTM (radio-equipped) will receive no assignments beyond the monitoring, and rescue of, the Inside Team.
2. **Radio monitoring.** Monitor the radio; ensure you are on the correct fire ground channel.
3. **Tracking of inside team.** Track the location of the Inside Team by the movement and amount of hose fed into the structure. The OTM may help the Inside Team advance hose from the outside the IDLH atmosphere.
4. **Listening to inside team.** Listen for sounds to identify their location, such as flowing water or windows breaking.
5. **Size-up.** Continuously size-up the building and fire conditions.
6. **Posting location.** Stay close to the vicinity of the Inside Team entry point, normally the front door. The OTM may briefly leave the door to monitor smoke conditions, or feed hose from outside the IDLH. After completing these objectives, the OTM will return to the entry point.

7. **Response to an event.** If an event occurs that endangers the Inside Team (flashover, collapse, etc.), attempt to contact the Inside Team on correct radio channel. Use term “Emergency Traffic” when attempting to contact the Inside Team. If the Inside Team is in need of rescue, follow the guidelines in the Outside Team rescue plan.
 - a. **Accountability.** As part of the monitoring duties, the OTM will keep track of initial incident scene accountability. Inside division/inside truck may ask the OTM for an account of inside personnel as they enter the structure. Until relieved of this duty by RIC, the OTM will mentally maintain an account of which crews are inside and how many firefighters on each crew.
 - b. **Relief.** The OTM shall continue in their role until relieved by RIC. A RIC member will obtain a “face to face” briefing before relieving the OTM and assuming the Outside Team Monitor responsibilities.
 - c. **Rejoining crew.** Once relieved, the original OTM should report to their Officer per MFR Best Practices A101 Fireground Operations Tactical/Task level benchmarks section, that their assignment is complete. The Officer should direct this member to another assignment. If the original OTM cannot report to their Officer, they should stay close to the vicinity of the Inside Team entry point. They shall NOT enter into the IDLH atmosphere and try to locate their Officer.

D. The Second Member of the Outside Team Duties.

1. **Other duties.** The second member of the Outside Team may be assigned other tasks, so long as these tasks or functions are in proximity to the entry area for possible rescue, and these tasks or functions can be immediately set aside if rescue is necessary. The most common duty the second member of the Outside Team performs is that of a Pump Operator.
2. **30-second ready.** This member shall be bunkered to the extent they are “30 second ready” when activated. This means, at a minimum, bunker pants on, coat on (can be unzipped), SCBA on, and face piece, not donned, but ready to be connected to SCBA regulator. They should dress to be “30 second ready” before the Inside Team makes entry into the IDLH atmosphere and maintain the state of being “30 second ready” until RIC is established unless an exception is taken. If the 2nd OTM is the pump operator of an Engine with a mid-ship pump then the SCBA is not required to be on due to the limited space between the pump panel and the cab. The SCBA should be positioned near the driver so that it is quickly accessible.
3. **Relief.** After RIC is established, this member can dress down to the appropriate level of PPE for their environment.
4. **Monitoring.** This member shall also continually monitor the fire ground radio channel.

E. Outside Team Rescue Plan.

1. **No contact with inside team.** If the Inside Team needs assistance and/or there is no response from the Inside Team:
 - a. **Declare emergency traffic.** OTM should use the term “Emergency Traffic” when attempting to contact dispatch. Advise Fire Dispatch and responding companies of a “Firefighter Down” situation, including who is in trouble, where they are, what has happened, and how many firefighters are in trouble.
 - b. **Declare intentions.** Both Outside Team members should meet to discuss whether to attempt a rescue or wait the arrival of responding companies. Report the decision to Fire Dispatch and responding companies.

F. Guidelines for Two-In / Two-Out Exception.

1. **Occupant in danger.** If there is a reasonable expectation that an occupant in danger of serious injury or death is within a structure, an Officer may decide to make an exception to the Two-In / Two-Out rule and enter into an IDLH atmosphere without an Outside Team established. This is a significant responsibility placed on the first Officer on scene.
2. **Risk / benefit.** This Officer must decide if information gathered during size-up justifies increasing the risk to firefighters. The decision should be based on all of the information available for that particular incident scene not just on a single fact or two. Factors that will influence the decision include occupancy, time of day, fire and smoke conditions, information from people on scene, etc. It is also understood that most of the time the Officer does not have enough information to “know for sure” that there is an imminent threat to human life. It is expected that if a preponderance of the evidence demonstrates the need for making an exception to the rule, the Officer will select the appropriate risk level for firefighters to save lives and prevent serious injury.
3. **Alternatives.** It is not always necessary to make an exception to the rule when there is imminent threat to human life. Depending on staffing levels and the number of firefighters on scene, Officers should strive to comply with the rule and still provide the best effort to save lives.
4. **Declare exception.** If an Officer decides to make an exception to the rule, the reason for the exception and the actions needed to prevent death or serious injury should be communicated to the firefighters on scene. Also, the Officer should announce the exception to the rule on the fire ground channel so the other responding Companies are aware of the situation.
5. **Entry without outside team.** The exception to the rule allows an Inside Team to enter the IDLH atmosphere without an Outside Team. The Inside Team must still comply with the rules for Inside Teams, such as wearing PPE and SCBA and remaining in contact. It is also understood that this scenario (Inside Team working inside the structure without an Outside Team established) should be temporary in nature.

6. **Termination of operating under the exception.** This high risk situation should be terminated as soon as the Officer can determine the hazard to human life no longer exists or can establish an Outside Team with arriving personnel. Any Officer that arrives on scene with another Company making an exception to the rule should place a high priority on establishing an Outside Team with personnel from the arriving Company.
- G. **Deployment of 4-person engine.** An Engine Company with four members arriving first at an incident at which an IDLH atmosphere will be entered will do the following (unless excepted by III.H. above):
1. **Inside team.** The Officer will assume Command, and the Officer and one Firefighter will make up the Inside Team.
 2. **Outside team monitor.** The other Firefighter will be the OTM and will remain outside the IDLH atmosphere with a radio, monitoring the Inside Team.
 3. **Second outside team member.** The Driver will be the second Outside Team member. The Driver will stay in contact with the OTM, and will don PPE after charging the initial handline.
 4. **Quint option.** *A quint may form inside and outside teams as described above or the Officer may elect to remain outside and have the teams established by the first due engine.*
- H. **Deployment of 4-person ladder.** A Ladder Company with four members arriving first at an incident at which an IDLH atmosphere will be entered will do the following (unless excepted by III.H. above)
1. **Officer's team.** The Officer will assume Command. The Officer and one member will be a team. This team may be the Inside Team or the Outside Team, whichever the Officer chooses.
 2. **Other team.** The remaining two members will be the other team.
 3. **Outside team.** Whichever team is the Outside Team, one member who is not the Officer will be the OTM and will remain outside the IDLH atmosphere with a radio, monitoring the Inside Team.
- I. **Deployment of companies with less than 4 members.** Any Company with fewer than four members arriving first at an incident at which an IDLH atmosphere is encountered will do the following (unless excepted by III.H. above):
1. **Officer duties.** The Officer will assume command and direct incoming companies.
 2. **Other duties.** The Officer will direct the other member(s) to begin fireground operations such as deploying handlines, establishing a water supply, setting ladders, preparing for ventilation, controlling utilities and/or any other tasks not within the IDLH atmosphere.

J. **Deployment of two three-person companies.** If one Engine and one Ladder (each with three members) arrive first at an incident at which an IDLH atmosphere will be entered, they will do the following (unless excepted by III.H. above):

1. **Command.** The Ladder Officer will assume Command.
2. **Inside teams.** The Engine Officer and one Firefighter and the Ladder Officer and one Firefighter (or Driver) will comprise the Inside Teams.
3. **Outside team monitor.** The Ladder Driver (or Firefighter) will be the OTM and will remain outside the IDLH atmosphere with a radio, monitoring the Inside Team.
4. **Second outside team member.** The Engine Driver will be the second Outside Team member. The Engine Driver will stay in contact with the OTM and will don PPE after charging the initial handline.